

WHAT IS CLAIMED IS:

1. A catheter, comprising:
 - a shaft portion defining a guidewire lumen and an inflation lumen having a longitudinal cut extending radially from an outer surface of the shaft to the guidewire lumen, wherein said inflation lumen is arcuate shaped;
 - at least one support strip entirely embedded within a wall of the shaft between the guidewire lumen and an outer surface of the shaft; and
 - a guide member.
2. The catheter of claim 1, further comprising a reinforcement member disposed adjacent to the inflation lumen and entirely embedded within the wall of the shaft.
3. The catheter of claim 2, further comprising a joint member disposed between the support strip and the nearest adjacent end of the reinforcement member.
4. The catheter of claim 3, wherein the joint member is constructed of one of a polyolefin.
5. The catheter of claim 3, wherein the joint member is partially embedded within the wall of the shaft.
6. The catheter of claim 3, wherein the joint member is entirely embedded within the wall of the shaft.
7. The catheter of claim 3, wherein the joint member is fixed within a groove in the shaft.

8. A catheter, comprising:

a shaft portion defining a guidewire lumen and an inflation lumen having a longitudinal cut extending radially from an outer surface of the shaft to the guidewire lumen, wherein said inflation lumen is arcuate shaped;

a pair of support strips entirely embedded within a wall of the shaft portion between the guidewire lumen and an outer surface of the shaft portion and disposed on opposing sides of the longitudinal cut;

a reinforcement member disposed adjacent to the inflation lumen between the inflation lumen and the outer surface of the shaft portion and entirely embedded within the wall of the shaft portion; and

a pair of joint members each disposed between an end of the reinforcement member and one of the pair of support strips.

9. The catheter of claim 8, further comprising:

a guide member.

10. The catheter of claim 8, wherein the joint members are selected from the group consisting of a polyolefin, and a polyolefin copolymer.

11. The catheter of claim 8, wherein the support strips are selected from the group consisting of stainless steel, titanium, tungsten, and Nitinol.

12. The catheter of claim 8, wherein the support strips are a high modulus polymer.